ABC of psychological medicine
Abdominal pain and functional gastrointestinal disorders

Elspeth Guthrie, David Thompson

Various functional gastrointestinal pain syndromes have been defined, but there is substantial overlap between them. There is also substantial overlap with other functional disorders such as chronic fatigue syndrome, fibromyalgia, and chronic pelvic pain. The classification system for functional gastrointestinal disorders (FGID) therefore remains controversial and is seldom used outside specialist and research settings. Furthermore, the psychological management of these different syndromes is essentially similar.

In primary care about half of the patients seen with gut complaints have FGID, the most common disorder being irritable bowel syndrome. A UK general practitioner is estimated to see eight patients with irritable bowel syndrome every week, one of whom will be presenting for the first time.

The quality of life of patients with chronic FGID is far poorer than in the general population, and is even significantly lower than in patients with many other chronic illnesses. These patients are not merely the "worried well." It is also important to resist the temptation to think of FGID as exclusively psychological disorders. A biopsychosocial approach is preferable. Physiological studies have suggested that patients with FGID have abnormal visceral sensation and abnormal patterns of bowel motility. Both psychological and physiological factors are involved, with the relative contribution of these varying among patients.

Aetiological factors include physiological and psychological predisposition, early life experience, and current social stresses. It has been shown that a combination of psychological factors and sensitisation of the gut after infection can trigger irritable bowel syndrome in adults.

Emotional distress—The degree of associated emotional distress with FGID depends on the treatment setting. In the community and general practice the prevalence of psychological distress in patients with functional abdominal pain is about 10-20%, whereas in clinic and outpatient settings it is 30-40%, and is even higher for patients who are "treatment resistant."

Abuse—Women with severe FGID often have a history of sexual and emotional abuse. This is as high as 30% in those attending gastroenterology clinics.

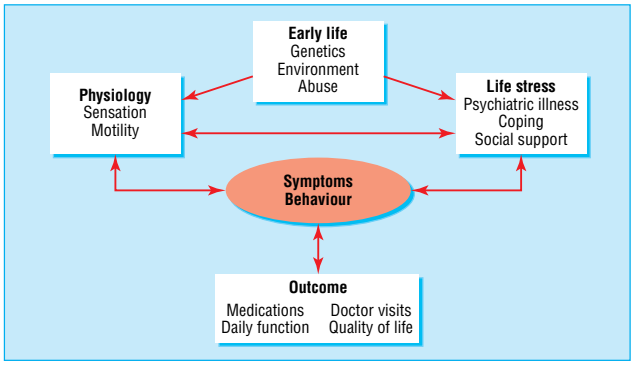
Functional gastrointestinal disorders

- Functional dyspepsia
- Ulcer-like dyspepsia
- Dysmotility-like dyspepsia
- Unspecified dyspepsia
- Functional diarrhoea
- Functional constipation
- Irritable bowel syndrome
- Functional abdominal bloating
- Unspecified functional bowel disorder
- Functional abdominal pain syndrome
- Unspecified functional abdominal pain

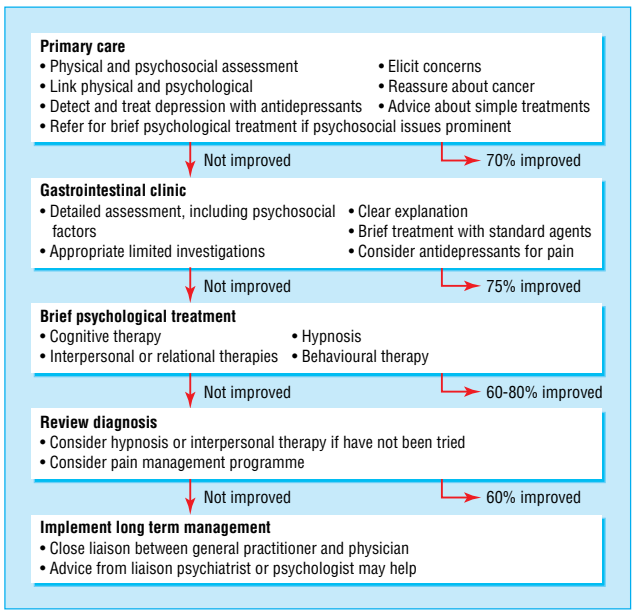
Diagnostic criteria for irritable bowel syndrome

In preceding 12 months at least 12 weeks of abdominal discomfort with 2 of 3 features: relieved with defecation, onset associated with change in frequency of stool, onset associated with change in form of stool
Supportive symptoms include

- Fewer than 3 bowel movements a week
- More than 3 bowel movements a day
- Straining during bowel movement
- Urgent bowel movements
- Feeling of incomplete bowel movement
- Hard or lumpy stools
- Loose or watery stools
- Passing mucus
- Abdominal fullness, bloating, or swelling



Biopsychosocial model for functional abdominal pain



Algorithm for treating patients with functional gastrointestinal disorders

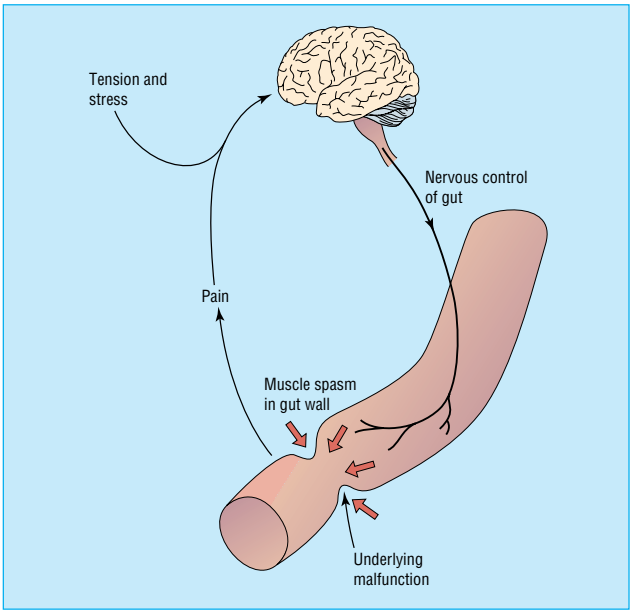
Initial management

Most patients with FGID have relatively mild symptoms and can be managed effectively in primary care. Only a third of patients seen in primary care with irritable bowel syndrome are referred to gastrointestinal specialists for further assessment and treatment.

Symptomatic treatment—Drug treatments for FGID are aimed at improving the predominant symptoms, such as constipation, diarrhoea, abdominal pain, or upper gastrointestinal symptoms. Standard treatments for lower bowel symptoms, depending on the predominant symptom, include dietary fibre, laxatives, antispasmodic agents (including anticholinergics and direct smooth muscle relaxants), and antidiarrhoeals. Treatment for upper gastrointestinal symptoms include H_2 receptor antagonists and prokinetics. There are several useful reviews of the efficacy of these agents in FGID (see further reading).

Psychological management—Initial management can be enhanced by incorporating brief psychological management strategies. Many patients with FGID are afraid that they have a serious underlying disease such as cancer, and attempts should be made to elicit such fears and address them. It is also important to provide a positive and credible explanation for the symptoms. The explanation should include both physiological and psychological factors. One way of explaining symptoms is to describe how the bowel is a segmented tube in which food is propelled down by the sequential squeezing of each segment. The nervous control of this system is delicate and complicated, and disruption of it consequently produces muscle spasm in the bowel wall, which results in pain and gas. Stress and other psychological factors such as anxiety cause bowel symptoms by affecting this nervous control.

Antidepressants—A recent meta-analysis of 12 randomised controlled trials of antidepressants for treating FGID concluded that they are moderately effective. On average, 3.2 patients need to be treated to substantially improve one patient's symptoms. Antidepressants should therefore be considered if there is clear evidence of a depressive disorder, but they may also help to reduce pain in the absence of depression.



Explanation of how physiological and psychological factors combine to produce abdominal pain

Management of chronic cases

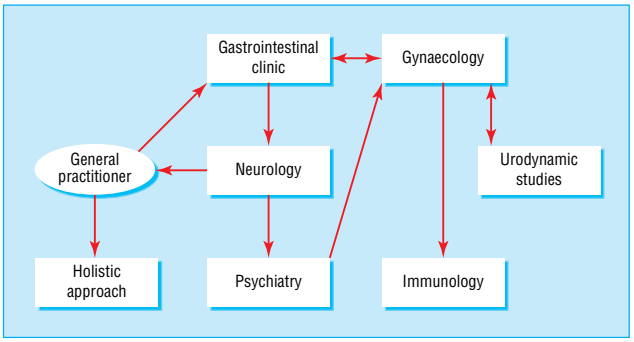
In the case of patients with chronic symptoms that have not responded to treatment, psychological factors are likely to be important. Doctors should try to elicit patients' concerns, seek evidence of emotional distress, and, over several consultations if necessary, help them to make tentative connections between psychological factors, life stresses, and the pain.

The following strategies are suggested:

- Set aside an appointment that is longer than usual, so there is time to deal with a patient's concerns. This is better than several fruitless, rushed consultations focusing only on symptoms
- Make sure that any investigations are based on the patient's history and examination. Do not allow yourself to be pushed into ordering investigations that are not clinically indicated. Try to avoid setting up a "referral matrix," with the patient being referred on from one specialty to another
- If you are concerned about a potential complaint, keep a detailed record of consultations, including any requests for investigations and the medical reasons for not ordering them. Repeated investigations that are not medically indicated can be unhelpful in increasing a patient's illness concerns. If you are worried about possible litigation, discuss the situation with a colleague and ask him or her to review the notes
- Emphasise the role that patients can play in improving or relieving pain by carrying out agreed strategies or exercises. Include the patient in decision about treatment options. Encourage membership of self help groups and organisations. The International Federation for Functional Gastrointestinal Disorders is a well respected organisation that provides useful information for patients. For patients with irritable bowel syndrome, the IBS Network is UK based and is also helpful
- Avoid changing treatments too often; improvement will be slow. Patients are likely to raise concerns about their condition at every consultation, so be prepared to give an explanation of the symptoms more than once. Make a note in the records of what you have said so that you don't contradict yourself
- Be prepared for patients to continually question your approach and think about ways to address this before each consultation. It may be helpful to discuss your management with a psychologist or psychiatrist with a special interest in somatic problems, even if patients do not wish to be referred for psychological treatment

Management of chronic functional abdominal pain

- Set the agenda
- Provide unambiguous information about findings
- Time planning: a longer planned session may save time in long run
- Identify psychosocial factors
- Set limits for investigations
- Encourage patient to take responsibility
- Don't treat what patient doesn't have



"Referral matrix" that can develop when managing a patient with chronic functional abdominal pain

Helpful patient organisations

- International Foundation for Functional Gastrointestinal Disorders. www.iffgd.org/
- IBS Network. http://homepages.uel.ac.uk/C.P.Dancey/ibs.html

- The aim of treatment should be to improve patients' symptoms and functioning rather than to abolish them. Although some patients may remain chronically disabled despite treatment, appropriate and consistent management can prevent deterioration and protect patients from unnecessary surgery.

Referral for psychological treatment

For patients who have not responded to initial management, four different kinds of psychological treatment have been evaluated in FGID. They are cognitive therapies, behavioural therapies, interpersonal therapies, and hypnosis. Each therapy has a different mechanism of action, but they have the common aims of reducing symptoms and improving functioning. Most treatments are delivered on a one to one basis, once weekly, over a period of two to four months.

Although most trials indicate a positive outcome for psychological treatment, many have methodological flaws and further studies are required before definitive recommendations about treatment can be given. The most convincing evidence for the efficacy of specific psychological treatments is for patients with chronic or refractory abdominal symptoms. However, there may also be an important role for earlier intervention in order to prevent such long term difficulties.

Psychological treatments are not always available. As in any other specialty, therapists need to have experience of treating chronic abdominal pain or chronic bowel disorders to develop and retain competence. Psychological services based in primary care are an option for patients with mild to moderate symptoms, but counsellors are unlikely to develop the expertise to enable them to treat patients with severe or refractory abdominal symptoms. Similarly, referral to a psychiatrist or psychologist who is more used to managing severe mental illness is unlikely to be fruitful. Dedicated medical liaison services with experience of somatic problems are more likely to be effective. If these do not exist consideration should be given to establishing a hospital based psychological medicine service.

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The ABC of psychological medicine is edited by Richard Mayou, professor of psychiatry, University of Oxford; Michael Sharpe, reader in psychological medicine, University of Edinburgh; and Alan Carson, consultant neuropsychiatrist, NHS Lothian, and honorary senior lecturer, University of Edinburgh. The series will be published as a book in winter 2002.

The diagram of a biopsychosocial model for functional abdominal pain is adapted from Drossman DA et al, *Gut* 1999;45(suppl):II25-30.

Psychological treatments

Cognitive therapy
- Modifies patients' maladaptive beliefs about their pain and symptoms
- Encourages associated behaviour changes
- Patients keep diaries to monitor pain and other symptoms, associated thoughts, and behaviour
- As therapy progresses, it may be possible to identify underlying beliefs or fears about pain that drive preoccupation and worry
- Therapeutic work directed at activating three change mechanisms:
  1 Rational self analysis or self understanding (patients explore idiosyncratic beliefs and fears and connect these to their pain)
  2 Decentring (patients gain distance from their selves by identifying their self talk and labelling it)
  3 Experiential disconfirmation (patients challenge their fears or irrational beliefs through planned behavioural experiments)

Behavioural therapies
- Focus on changing behaviour; they do not address motives or fears
- Patterns that reinforce abnormal behaviour are identified and reversed
- Activity is gradually increased, particularly for functional activities such as social recreation and physical exercise
- Pain behaviours are ignored and activity related behaviours are reinforced
- Patients usually receive educational packages to increase their understanding of the condition
- Anxiety management strategies often included in treatment
- Biofeedback can be used to teach patients to reduce tension in affected muscles and to promote relaxation as a coping strategy

Interpersonal therapies
- Focus on resolving difficulties in interpersonal relationships that underlie or exacerbate abdominal symptoms
- Key problem areas include unresolved grief or loss, role transitions, and relationship discord
- Initial focus is on the patient's abdominal symptoms, which are explored in great detail
- Emotional distress and abnormal feeling states arising from or linked to physical symptoms are identified
- Key problem areas in relationships and their link to physical and psychological symptoms are understood
- Maladaptive relationship patterns, which may have developed after key childhood experiences (such as sexual abuse) are identified
- Solutions to interpersonal difficulties are tested out in therapy and implemented in real world

Hypnosis
- Directed at general relaxation
- Hypnosis is induced using an arm levitation technique, which is followed by deepening procedures
- General positive comments about health and wellbeing are made
- Patients are asked to place their hand on abdomen, feel a sense of warmth, and relate this to asserting control over gut function
- This is reinforced with visualisation (if patient has ability to do this)
- Sessions are concluded with positive, ego strengthening suggestions
- After third session patients are given a tape for daily autohypnosis

Further reading

- Thompson WG, Heaton KW, Smyth GT, Smyth C. Irritable bowel syndrome in general practice: prevalence, characteristics, and referral. *Gut* 2000;46:78-82
- Drossman DA, Creed FH, Fava GA, Olden KW, Patrick DL, Toner BB, et al. Psychosocial aspects of the functional gastrointestinal disorders. *Gastroenterol Int* 1995.1995:8:47-90
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- Akehusrt R, Kaltenthaler E. Treatment of irritable bowel syndrome: a review of randomized controlled trials. *Gut* 2001;48:272
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Evidence based summary

- Treating functional gastrointestinal disorders with antidepressants is effective even in the absence of depression
- Although several psychological treatments show promise in treating functional bowel disorders, no trial has yet provided unequivocal evidence of effectiveness

Jackson J, O'Malley PG, Tomkins G, Balden E, Santoro J, Kroenke K. Treatment of functional gastrointestinal disorders with antidepressant medications: a meta-analysis. *Am J Med* 2000;108:65-72

Talley NJ, Owen BKO, Boyce P, Paterson K. Psychological treatments for irritable bowel syndrome: a critique of controlled treatment trials. *Am J Gastroenterol* 1996;91:277-86

BMJ 2002;325:701–3